

ABSTRACT OF THE DISCLOSURE

A plasma processing chamber including a slip cast part having a surface thereof exposed to the interior space of the chamber. The slip cast part includes free silicon contained therein and a protective layer on the surface which protects the silicon from being attacked by plasma in the interior space of the chamber. The slip cast part can be made of slip cast silicon carbide coated with CVD silicon carbide. The slip cast part can comprise one or more parts of the chamber such as a wafer passage insert, a monolithic or tiled liner, a plasma screen, a showerhead, dielectric member, or the like. The slip cast part reduces particle contamination and reduces process drift in plasma processes such as plasma etching of dielectric materials such as silicon oxide.